

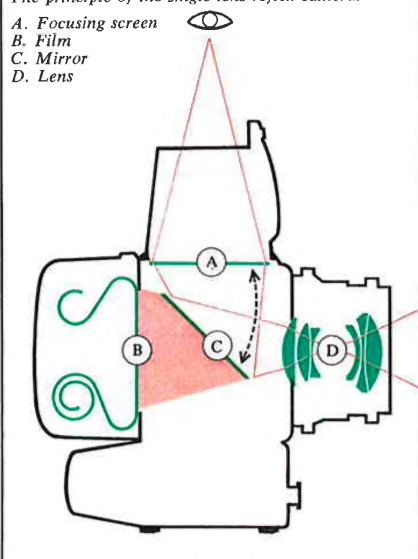
H A S S E L B L A D®

Instruction manual 500EL/M

H A S S E L B L A D®

The principle of the single-lens reflex camera.

- A. Focusing screen
- B. Film
- C. Mirror
- D. Lens



These instructions should prove to be of great help to the new owner. Read them carefully with the camera in front of you. An attempt has been made to explain the operation of the Hasselblad 500EL/M in an interesting and factual manner. Even the sturdily built Hasselblad must be properly understood and mastered (like any other precision instrument) in order to obtain the best photographic results. So read these instructions carefully — and get your reward in better pictures.

Fig. 1

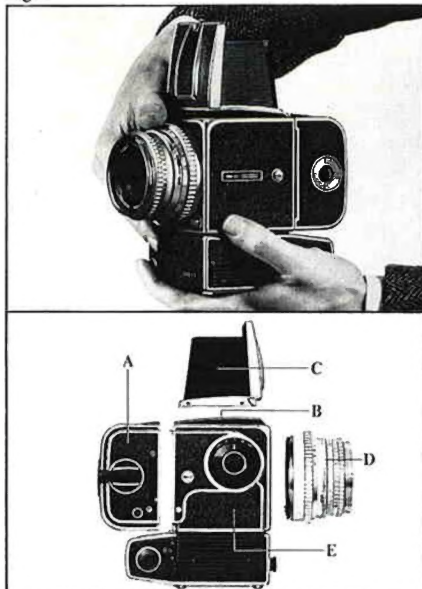


Fig. 2

LEFT-HAND GRIP

Fig. 1 shows the best way to hold the camera without a handgrip accessory. Hold the camera in the left hand, with the index finger on the release button, and grasp the lens barrel with the right hand. Focusing is then very easy using this grip. The right hand is also in a convenient position for changing settings, lenses, film magazines, etc.

If you have a tripod, make use of it when you work with the Hasselblad 500EL/M.

CAMERA: MAIN COMPONENTS

The Hasselblad 500EL/M is a motor-driven single-lens reflex camera. Fig. 2 shows the main camera components. These components are also important parts of the Hasselblad system: camera body (center, E); above, focusing screen (B) and focusing hood (C); lens (front D); film magazine (rear A).

These interchangeable components, as well as the accessory socket, battery charging and various ways of releasing the shutter, are treated separately in different parts of this instruction book.

Full instructions are supplied with most accessories. Therefore, they will only be briefly described here.

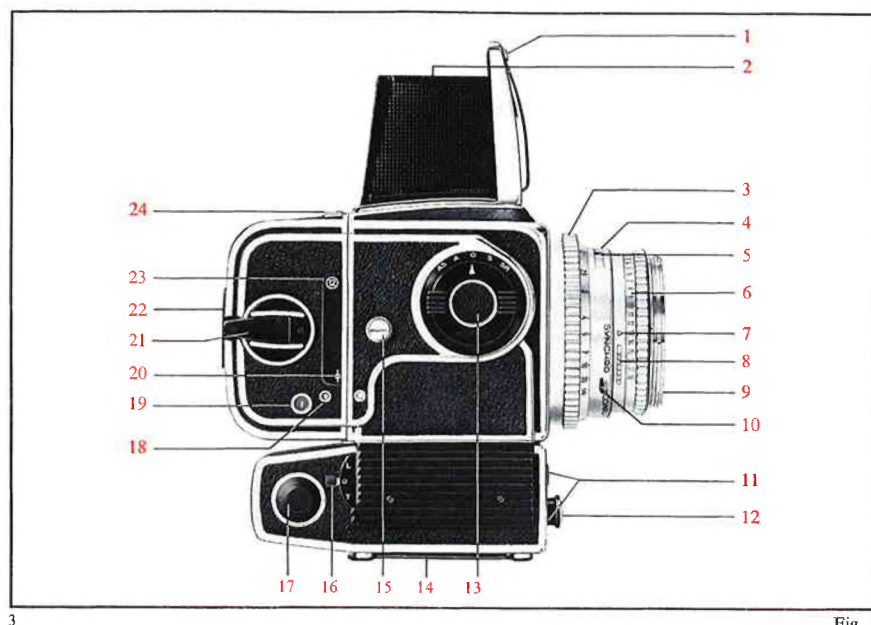


Fig. 3

- | | |
|---|--|
| 1 Catch for focusing hood and magnifier | 20 Film plane marking |
| 2 Fine-focusing magnifier | 21 Rapid-winding crank |
| 3 Focusing ring with distance scale and grip ring | 22 Film indicator flap |
| 4 Central index (black line*) | 23 Magazine type number |
| 5 Depth-of-field indicator | 24 Magazine catch |
| 6 Exposure value scale (EVS) | 25 Diaphragm ring with aperture scale |
| 7 Exposure value index (red triangle) | 26 Synchronization terminal |
| 8 Exposure value catch | 27 Flash synchronization and self-timer lever |
| 9 Internal and external bayonet mounts | 28 Catch for lever (27) |
| 10 Depth-of-field preview catch | 29 Shutter speed ring with speed scale and grip ring |
| 11 Front release sockets | 30 Button for lens-mount catch |
| 12 Release button (detachable) | 31 Cable-hook hole |
| 13 Selector dial | 32 Accessory socket |
| 14 Tripod plate | 33 Battery compartment |
| 15 Strap button (one on each side) | 34 Battery cover catch |
| 16 Time exposure, safety and charging lever | 35 Spoolholder key |
| 17 Side socket for exposure and battery charging | 36 Film-loading signal |
| 18 Film transport window | 37 Magazine slide |
| 19 Film counter | |

*White line on black-barreled lenses.

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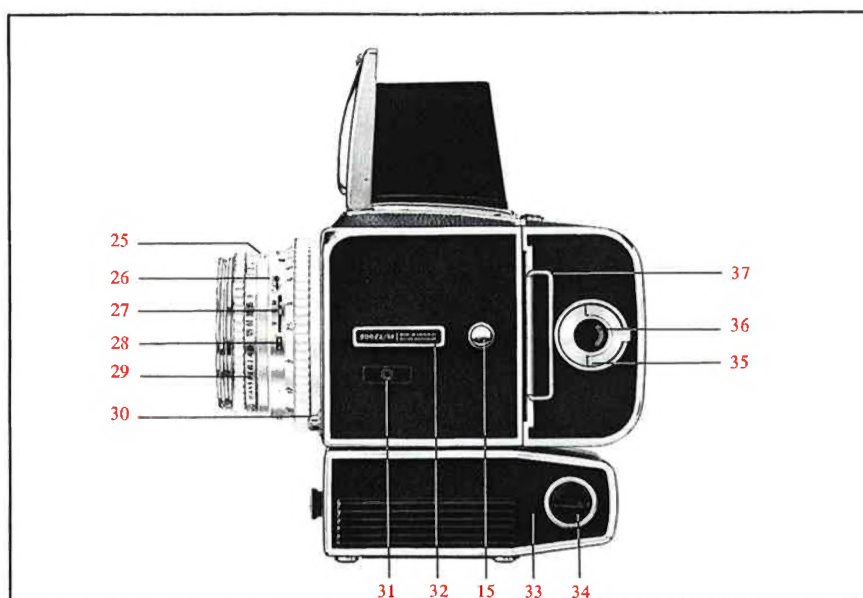


Fig. 4

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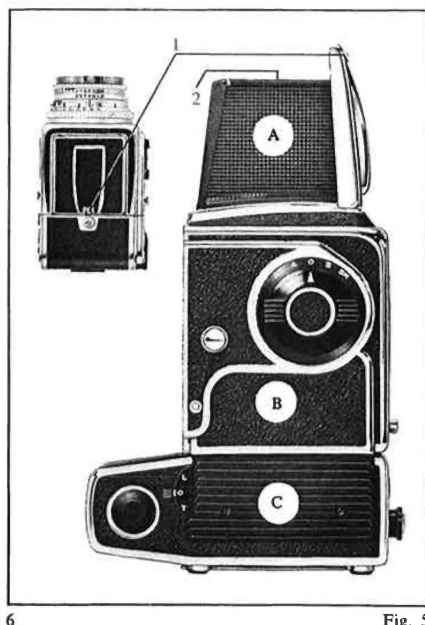


Fig. 5

FOCUSING HOOD

The focusing hood (A, Fig. 5) is a viewfinder which effectively shields the focusing screen from extraneous light. To open, move catch (1) to the right; the four "walls" of the hood then pop up into place (Fig. 5). Use the fine-focusing magnifier (2) to check on image sharpness. This magnifier springs into position when catch (1) is again moved to the right. To close the hood, first fold down the magnifier until it clicks into place. Then fold down the hood sides over the focusing screen. Then fold the rear wall and finally the cover. Other viewfinders are available, such as the prism viewfinders and magnifying hood. Always remove the film magazine *first* when changing viewfinders. Then slide the viewfinder off to the rear.

CAMERA BODY

The camera body contains the mechanical and electrical components required for camera operation (Fig. 5). The lower body section (C) contains the compartments for the batteries and the fuse, the motor and the transmission to the upper, main part of the camera body (B). The selector dial, focusing screen, mirror and auxiliary shutter are located in the main part. The camera body also has fittings for viewfinders, lenses and film magazines, as well as sockets for releasing the shutter and charging the batteries.

Batteries

The camera is operated by a battery-powered motor (C, Fig. 7). Rechargeable DEAC 5/500 DKZ nickel-cadmium batteries are used. There is space for two batteries in the battery compartment (A). Each fully-charged battery is good for about 1,000 exposures. Batteries are housed separately, and the battery cover (33) on the left side of the camera must first be removed before batteries can be inserted. To do this, insert the Hasselblad key disc or a coin in the slot on the cover catch (34) and rotate the cover catch a quarter turn counter-clockwise until the slot is vertical. This unlocks the rear of the cover which now can be removed by sliding it toward the front of the camera. When inserting batteries, insert the narrow end (see Fig. 8) first. This end is also marked with the + sign. The battery cover cannot be closed if a battery has been inserted incorrectly. The shutter cannot be released nor a battery charged until the battery cover has been closed.

To charge the batteries, see Page 25.

The shutter can be released when the battery is in position.

Fuse

A 1.6 amp medium slow-blow fuse (5×20 mm) must be used in the fuse hole (B, Fig. 7).

Fig. 6

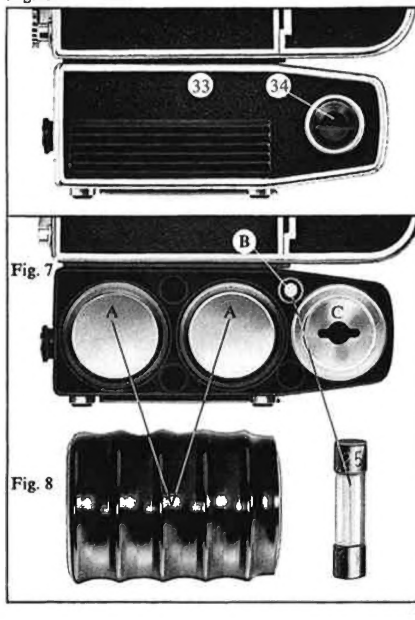


Fig. 7

Fig. 8

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Fig. 9

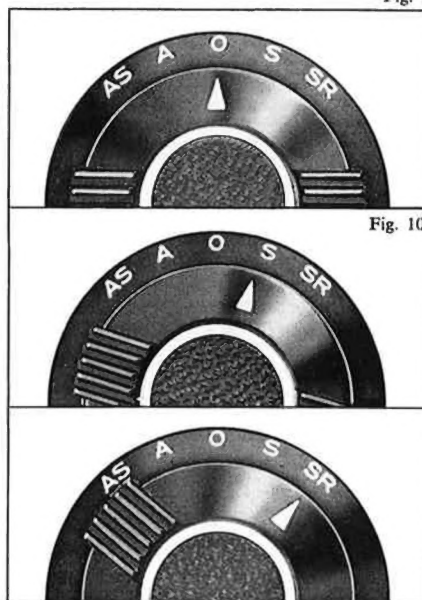


Fig. 10

Fig. 11

Selector dial

The selector dial has five markings which control the release function in various ways.

O = Normal position (Fig. 9). After making an exposure with the dial in this position, the motor advances the film, cocks the between-the-lens shutter and returns the mirror to the focusing position.

S = Pre-release (Fig. 10). At this setting, certain functions are set up in advance, thereby reducing reaction time to a minimum. When the dial is moved to S, the between-the-lens shutter closes, the mirror swings up out of the way, the auxiliary shutter opens and the lens stops down to the preset f/stop. The selector dial then automatically returns to the O position.

SR = Pre-release repeat (Fig. 11). The same action as S, with the difference that the SR setting produces pre-release after every exposure cycle.

A = Automatic (Fig. 12). At this setting, the camera makes repeated exposures (one a second) as long as a triggering impulse is provided and there is unexposed film in the magazine. This automatic setting should not be used at shutter speeds of 1/15 sec. or slower (see Page 25).

AS = Automatic pre-release (Fig. 13). Operation is similar to A but the camera stops in the pre-released position after every exposure sequence.

Time lever

The time lever (16) is used for long exposures (T), for locking the camera against inadvertent triggering and for battery charging (L). O is the normal setting.

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The time lever (16) is set at T for exposures lasting more than 1 minute and for self-timer operation (see Page 17). The shutter should be set at B for time exposures, and the selector dial should be set at O, S or SR. When the lever is moved from O to T, the camera is triggered mechanically without any electrical impulse, and the shutter can remain open without any drain on the battery. The shutter is closed when the lever is returned to O. Film advance and shutter cocking are automatic. When the time lever is moved to L, shutter release is blocked so that inadvertent triggering is impossible. L is also used when charging the batteries (see Page 25).

Double exposure

Make the first exposure by depressing and holding down the front release button with your fingertip. Move lever (16) to the "L" position. Insert the magazine slide and remove the magazine. Push the release lever back to the "O" position. Re-attach the magazine, remove the magazine slide and expose the second frame in the usual way unless further exposures are desired on the same frame, in which case the above operation must be repeated.

Side socket for triggering and battery charging

The camera's side socket (17) is a standard 5-pin DIN-type socket. It is used for shutter release with release cords (types SK, LK and DK), by radio or intervalometer and for charging the camera's batteries. The socket has a protective cover.

Fig. 12

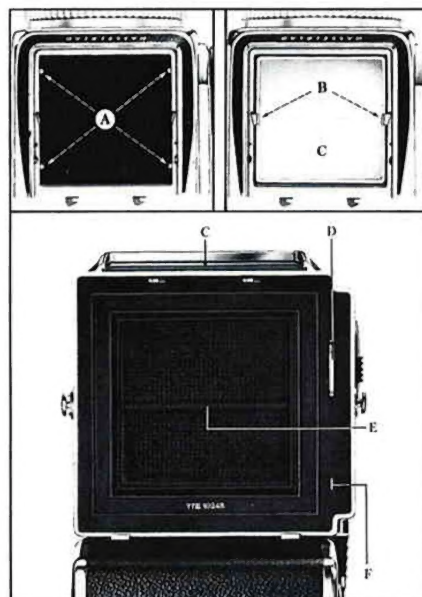


Fig. 13



Fig. 14

9



10

Fig. 15

Focusing screen

The focusing screen (A, Fig. 15), which displays a parallax-free image, has a center cross to facilitate horizontal and vertical alignment. Masks can be used on top of the screen with film formats other than 2 1/4"-square.

Changing the focusing screen

Remove the magazine and focusing hood. Shift the retainers (B) out of the way. Cup your hand over the focusing screen and turn the camera upside-down. The screen should then drop into your hand. If it fails to fall out by its own weight, remove the lens and cautiously press on the focusing screen with a finger from the inside of the camera body. NOTE: The mirror must be down. A focusing screen can then be inserted into the camera body when the retainers (B) are completely out of the way. Make sure the base of the focusing screen (the side with a red strip of tape) is resting on all four supports (A) before the viewfinder is replaced. When the viewfinder is slid in over the screen, the retainers automatically lock the screen in place. Handle the plastic focusing screen with great care. It is easily scratched.

Auxiliary shutter and back plate

The auxiliary shutter (E) at the rear of the camera body makes possible the use of interchangeable lenses. It consists of two vertically traveling flaps. Power for film winding is transmitted via the gear wheel (D). The double exposure prevention catch and the film transport numbers are operated by the pin (F). Keep (D) and (F) free from dirt and dust.

Release sockets

The camera has two sockets at the front (11, Fig. 16) for the release button (12) or release cords (type FK).

THE LENS

The 80mm f/2.8 Planar standard lens, like the other Hasselblad lenses, has a built-in Synchro-Compur leaf shutter, an automatic diaphragm, an exposure value scale (EVS), automatic depth-of-field indicators, M and X flash synchronization at all shutter speeds and a V self-timer setting. The lens is attached to the camera via a bayonet mount.

Diaphragm

The desired f/stop is set with the diaphragm ring (25). This ring is cross-coupled with the shutter speed ring (29), and both are maneuvered together using the grip ring. The diaphragm ring can be disengaged in order to change the f/stop without altering the shutter speed set. When the exposure value catch (8) is pressed back, the diaphragm ring is disengaged and can be turned to the desired f/stop opposite the central index (4). The automatic diaphragm stops the lens down to the preset f/stop immediately prior to exposure. Thus, focusing is normally done with the diaphragm wide open. Depth-of-field at the preset f/stop can be studied by depressing the depth-of-field preview catch (10), thereby shifting the diaphragm down to the preset f/stop. The diaphragm automatically returns to the maximum effective aperture after exposure or when the diaphragm ring (25) is turned to that f/stop.

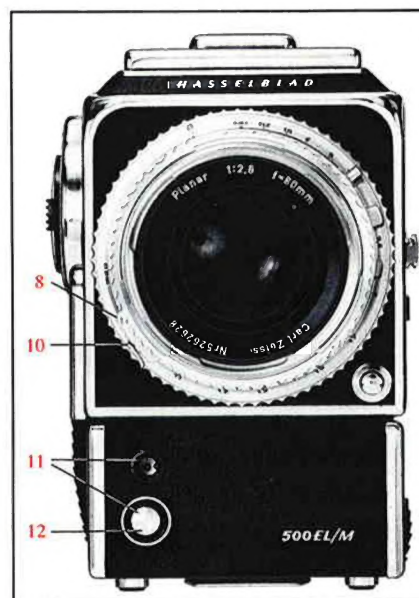


Fig. 16

11



Fig. 17

The f/stop and shutter speed combination which is set opposite the central index (4) determines the exposure. Each such combination is equivalent to an exposure value on the red scale (6). The exposure value can be determined with an exposure meter, such as the Hasselblad exposure meter. The exposure value obtained is set opposite the red index (7). The correct exposure is then obtained, irrespective of which f/stop and shutter speed combination is set opposite the central index (4) with grip ring (29). Remember, however, that exposure is not completed until a release signal has been made when "B" is opposite the central index.

Example 1 (see Fig. 19). The exposure meter indicates an exposure value of 12. Set this number opposite the red index (7). This setting provides seven different f/stop and shutter speed combinations. Thus, the entire aperture scale can be used with a choice of shutter speeds from 1/8 to 1/500 sec.

Long exposures

At exposure values of 8 or less, the possibilities of using instantaneous shutter speeds become limited. The green figures on the lens indicate exposure duration (in full seconds) for the respective f/stops applicable when the shutter speed is set at "B".

Shutter speeds

The shutter speed ring (29) has three different engraved scales with black (white*), green and red figures respectively. The rotation of this ring is restricted so that only the black figures and the green letter "B" can be set opposite the black index (4).

The scale with *black* figures indicates the shutter speeds from 1 sec. to 1/500 sec, i.e. the numbers 1 to 500 represent the shutter speeds 1 sec., 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 and 1/500 sec. These speeds are set by turning the grip ring (29) until the desired number (shutter speed) is opposite the central index (4).

The scale with *green* figures indicates exposure times in seconds. The "B" position is equivalent to 2 sec. The green scale is used as an aid in estimating time exposures longer than the 1 sec. provided by the shutter (see Page 14, Example 2; and Fig. 19).

The scale with *red* figures is used to set the exposure value.

*On black-barreled lenses.

Exposure value

The shutter speed scale (29) and the diaphragm scale (25) are subdivided in such a manner that every number on the diaphragm scale has a corresponding number on the shutter speed scale. As previously mentioned, the two scales are cross-coupled but can be disengaged by pressing the catch (8) back.

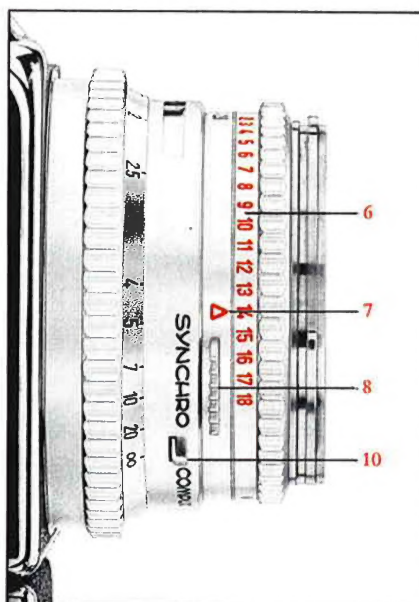


Fig. 18

| Exposure value | Aperture | | | | | | |
|----------------|----------|-------|-------|-------|-------|-------|-------|
| | B=2 | 2,8 | 4 | 5,6 | 8 | 11 | 16 |
| 2 | 2 | 4 | 8 | 15 | 30 | 60 | 125 |
| 3 | 1 | 2 | 4 | 8 | 15 | 30 | 60 |
| 4 | 1/2 | 1 | 2 | 4 | 8 | 15 | 30 |
| 5 | 1/4 | 1/2 | 1 | 2 | 4 | 8 | 15 |
| 6 | 1/8 | 1/4 | 1/2 | 1 | 2 | 4 | 8 |
| 7 | 1/15 | 1/8 | 1/4 | 1/2 | 1 | 2 | 4 |
| 8 | 1/30 | 1/15 | 1/8 | 1/4 | 1/2 | 1 | 2 |
| 9 | 1/60 | 1/30 | 1/15 | 1/8 | 1/4 | 1/2 | 1 |
| 10 | 1/125 | 1/60 | 1/30 | 1/15 | 1/8 | 1/4 | 1/2 |
| 11 | 1/250 | 1/125 | 1/60 | 1/30 | 1/15 | 1/8 | 1/4 |
| 12 | 1/500 | 1/250 | 1/125 | 1/60 | 1/30 | 1/15 | 1/8 |
| 13 | | 1/500 | 1/250 | 1/125 | 1/60 | 1/30 | 1/15 |
| 14 | | | 1/500 | 1/250 | 1/125 | 1/60 | 1/30 |
| 15 | | | | 1/500 | 1/250 | 1/125 | 1/60 |
| 16 | | | | | 1/500 | 1/250 | 1/125 |
| 17 | | | | | | 1/500 | 1/250 |
| 18 | | | | | | | 1/500 |

Fig. 19

Example 2 (Fig. 19). The exposure meter indicates an exposure value of 4, and this number is set opposite the red index (7). At f/4, a 1 sec. exposure is called for, and exposure can be made automatically in the ordinary manner (the numbers in this case are marked by squares in Fig. 19). But if a smaller f/stop, such as f/11, must be used for the sake of depth-of-field, then read off the number in the f/11 column which is opposite 4 on the EV scale. The number obtained in this case is 8 (numbers circled in green in Fig. 19). Remember this number. It is the number of seconds required for correct exposure at f/11. Then set "B" opposite the central index and turn the diaphragm ring until 11 (= f/11) is opposite the central index. When the release button is pressed with the shutter set at "B", the shutter remains open as long as an exposure impulse is provided. In the example given above, the release button should be pressed for 8 seconds. Use a watch to calculate this time or slowly count to 8. When color film is used at long exposures (more than 1 sec.), exposures must be increased to compensate for reciprocity failure. There may also be shifts in color balance. Correction data are available from the film manufacturers.

Focusing and depth-of-field

The focusing ring (3) is turned until the subject is as sharp as possible on the focusing screen. Depth-of-field can be checked out with the depth-of-field preview catch (10). The larger the f/stop number, the greater the depth-of-field (Fig. 21). The focusing ring has a distance scale, and the distance from the camera's film plane to the subject in sharp focus is read off opposite the central index (4).

Depth-of-field indicators

The moveable depth-of-field indicators (5) greatly simplify focusing. The depth-of-field available at any f/stop is automatically shown against the distance scale, and the subject-to-film plane distance can be read off opposite the central index (4). The depth-of-field indicators consist of two parallel, moveable red pointers. The distance between the pointers changes as the aperture setting is changed. Large apertures, i.e. small f/stop numbers provide less depth-of-field (narrow space between pointers) than small apertures, i.e. large f/stop numbers (wide space between pointers). See Fig. 21, in which the narrow ring shows the position of the pointers at the largest f/stop (f/2.8) and the broad ring shows the position of the pointers at the smallest f/stop (f/22).

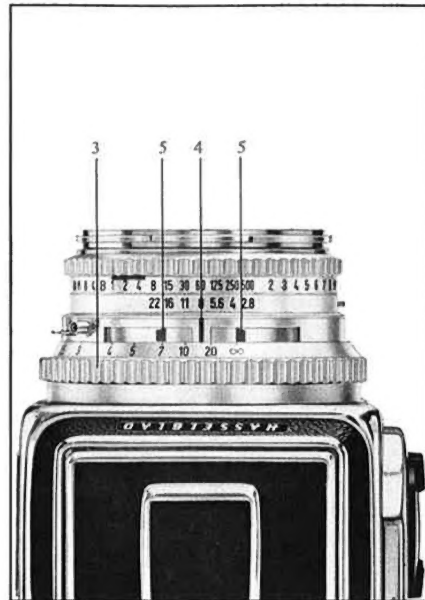
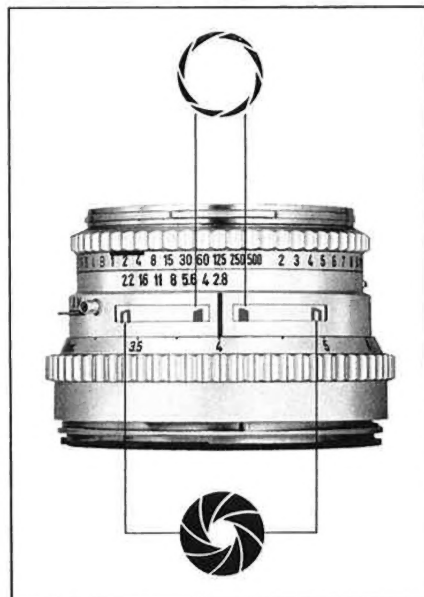


Fig. 20

15



16

Fig. 21

Some tips on focusing

A practical working method for establishing predetermined depth-of-field is to first focus on the near plane of the subject and to note the distance on the distance scale. You then focus on the far plane of the subject. Then turn the focusing ring until the pointers embrace the near and far distances. The lens will then be focused at a distance which will give sharp focus to both the near and the far subject planes.

When photographing a moving subject close up, it may be advantageous to leave the lens set at a given distance and to achieve sharp focus by moving the camera back and forth as the subject moves.

In sports photography, for example, when the action takes place within a given zone of focus, the depth-of-field indicators can be preset to give the desired depth-of-field.

Direct measurement of photographic distance is often appropriate when a given scale of reproduction is desired, such as in close-ups.

Focusing is made even easier by attaching a Hasselblad quick-focusing handle to the focusing ring. The handle has moveable index markers which can be set at different focusing points or depth-of-field settings.

Self-timer and flash synchronization

The flash synchronization and self-timer lever (27) is protected against accidental movement by a catch (28). Push this catch forward when you wish to move the lever. See Fig. 22.

Self-timer

The self-timer mechanism is cocked when the lever (27) is moved to V. The self-timer starts working when the time lever (16) is moved to T. The delayed shutter release then takes place 8—10 sec. later. Thus, the auxiliary shutter remains open while the self-timing mechanism operates. Close the auxiliary shutter after exposure by moving the time lever (16) back to the O-position. X synchronization is also obtained when the self-timer is used with shutter speeds from 1 sec. to 1/500 sec.

Flash synchronization

The shutter has X and M flash synchronization at all shutter speeds. The connecting cord from the flash unit to the PC synchronization terminal is held in position by a cable-hook inserted in the cable-hook hole (31).

X synchronization

In X synchronization the shutter opens without delay so as to accommodate the very brief duration of electronic flash. The X setting is for electronic flash at all shutter speeds and for class F flash bulbs at the slower shutter speeds.

M synchronization

In M synchronization shutter tripping is delayed so that the output of expendable flash has a chance to reach full peak. The M setting is used for class M flash bulbs at all shutter speeds.

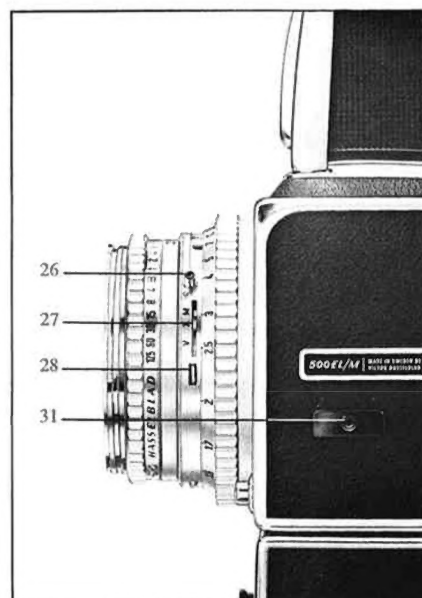


Fig. 22

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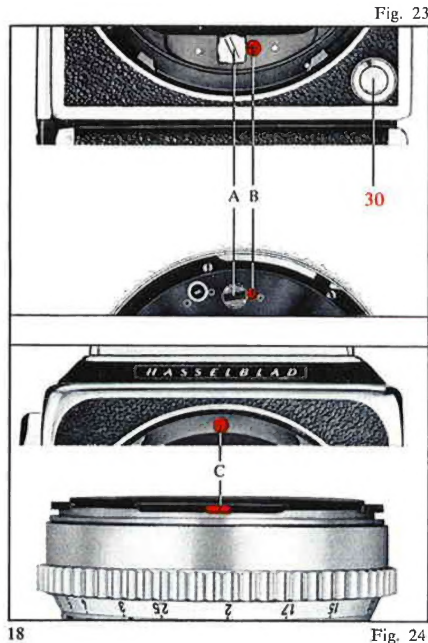


Fig. 23

Changing lenses

Removing the lens

Hold the lens barrel firmly with the right hand and the camera body with the left hand. Press button (30) with the left index finger. Turn the lens counter-clockwise one-fifth of a turn to detach the lens.

Note that the lens can only be removed when the auxiliary shutter is closed and the mirror is in the down position. Therefore, the camera should not be in the pre-release position (SR or AS) when changing lenses.

Shutter cocking

The shutter is automatically cocked immediately after each exposure. After an A or O exposure, the shutter is kept open as long as the lens is attached. If the lens has been removed from the camera body and the between-the-lens shutter released (i.e. closed), the shutter must be recocked before the lens is attached to the camera body again. The simplest way to see if the shutter is open is to look through the lens.

In the cocked position, the slot of the cocking shaft (A) should be in line with the red spot (B). See Fig. 23. If it becomes necessary to cock the shutter with this shaft, use a small coin which fits the slot and rotate counter-clockwise one turn.

Attaching the lens

Hold the lens barrel with the red line (C) opposite the large red dot (C) on the camera body (see Fig. 24). Push the lens barrel in and turn it clockwise until it clicks into place.

FILM MAGAZINE

Changing the magazine

The magazine slide (37) must be inserted before the magazine is removed from the camera. Then push the magazine catch (24) to the right, swing the magazine down and lift it off the two lower catches (B). See Fig. 25.

The groove around the front plate of the magazine fits onto the ridge around the back plate of the camera body to make a light-tight seal. The magazine slide (37) protects the film from light when the magazine is removed. When changing the magazine, make sure that the film transport window (18) shows a white signal.

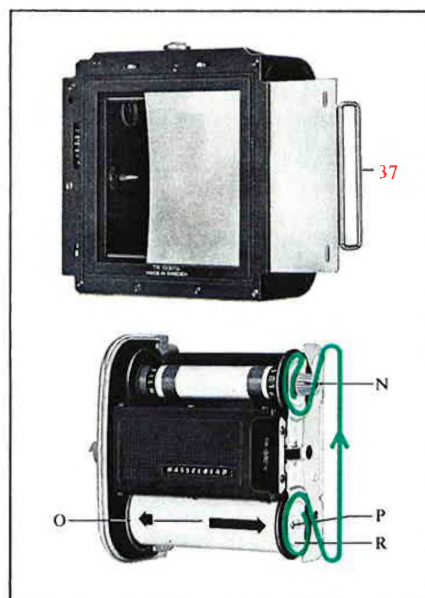
Attach the magazine to the camera in the following manner: Fit the magazine onto the two lower catches (B) and swing the upper part of the magazine against the upper catches (A) while pushing the magazine catch (24) to the right. Release the magazine catch. Push the magazine catch to the left to make sure that the magazine is locked in place. Pull out the magazine slide. The camera is now ready for use.

Note the following safety precautions: The magazine cannot be removed unless the magazine slide is inserted. No exposure can be made until the magazine slide has been withdrawn after attachment of the magazine.



Fig. 25

19



20

Fig. 26

Film loading

1. Fold out key (35), turn it counter-clockwise and remove the spoolholder (L) from the magazine.

2. Turn key (35) clockwise. This releases film clamp (F).

3. Flip up the spool clips (N) and (R). Insert the take-up spool under clip (N), i.e. the one with the knurled knob. Insert the full roll under clip (R) with the film positioned as shown in the photo.

4. Pull out four or five inches of the protective backing paper and guide its edge under the film clamp (F).

5. Insert the end of the backing paper into the take-up spool. Turn the knurled knob until the double-pointed arrow (O) printed on the backing paper is opposite the arrow mark (P).

6. Turn key (35) counter-clockwise to keep the backing paper in position by the film clamp (F).

7. Holding the spoolholder with key (35), insert the holder into the magazine all the way and lock it in place by turning the key (35) clockwise. This action also opens film clamp (F). Fold down key (35).

8. Fold out the rapid-winding crank (21) and turn it clockwise until it stops (about 10 revolutions). The number "1" is now visible in the film counter window (19). Give the crank a reverse turn and fold it into position again. See the photo. The magazine is now ready for use.

Film winding

After the twelfth frame has been exposed (in 12 exposure magazines) and transferred to the take-up spool, the exposure stop-catch automatically operates. Fold out crank (21) and wind the remaining film onto the take-up spool.

In general

The rapid-winding crank (21) is only locked at frame "1". The film counter automatically returns to "0" when the spoolholder is extracted.

There is a film-loading signal in the center of key (35), i.e. a white-red indicator (36). This indicator is completely white when no film is exposed. Each successive exposure gradually shifts the indicator bar from white to red. The indicator is completely red after the twelfth exposure.

The film plane is indicated on the side panel (20).

There is a film-type and speed indicator (22) at the rear. To indicate the speed of the film in the magazine, flip open flap (22), which opens downwards, and turn the serrated ring (C) with your fingertip to the appropriate ASA or DIN setting. A piece of paper or a tab torn from an empty film box can be inserted under the indicator flap to show the type of film in the magazine.

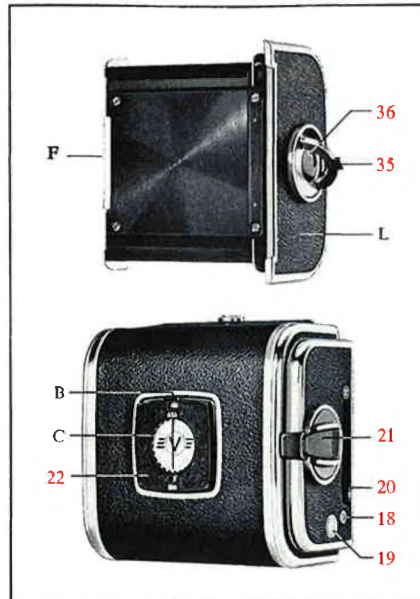


Fig. 27

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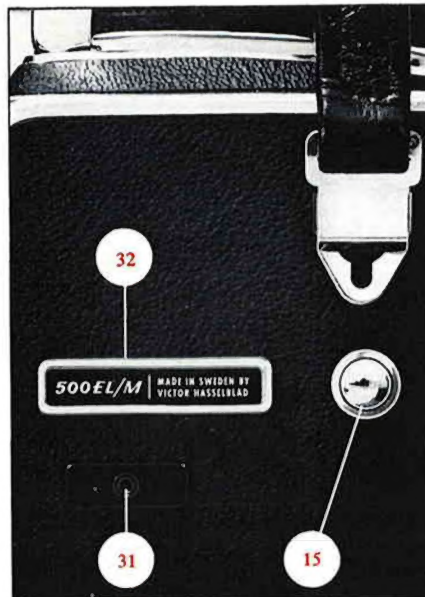


Fig. 28

22

ACCESSORY BRACKETS AND FIXTURES

Strap buttons

Attach the carrying strap to the camera by placing the buckles onto the strap buttons (15). Press its front section against the camera body and simultaneously pull the buckles back. Remove the strap by lifting the spring catch while pulling the buckles to the front.

Hole for cable-hook

The cable-hook for keeping the synchronization cord in position is inserted into the hole (31). To extract the hook, pull it straight out.

Accessory socket

This socket (32) is used for the attachment of accessories, such as the sports viewfinder, spirit level, adjustable flash shoe and the radio case.

Front bayonet mounts

The front of the Hasselblad lenses (with a front diameter of 50 mm) features an internal bayonet mount for the attachment of filters and auxiliary lenses (see Fig. 30) and an external bayonet mount for the lens shade (see Fig. 29) and ringlight.

Tripod plate

The plate (14) under the camera has a tripod bushing (W 3/8"). It also has a quick-attachment shoe for the double handgrip and the tripod quick-coupling. The latter is an accessory which allows the camera to be attached to and removed from the tripod very quickly (see Fig. 31).

ALTERNATIVE RELEASE METHODS

Shutter release can be accomplished in several different ways, e.g. by the release button, by release cords of various lengths, by an intervalometer or by radio. The general rule for all release methods is that the button (or contact) which provides the triggering impulse be kept pressed (closed) until the leaf shutter has completed exposure. This should be kept in mind, especially in conjunction with shutter speeds from 1/15 sec. to 1 sec. If the shutter is set at 1 sec., for example, and the release button is released before the leaf shutter has closed, then the exposure is prematurely terminated by the closing of the auxiliary shutter.

Release button

The release button (12) is inserted into one of the two release sockets at the front of the camera and is used for hand-held camera operation. Use fast shutter speeds, hold the camera steadily and depress the button with uniform pressure.

Release cords

A tripod or some other support should be used at the slower shutter speeds. The use of a release cord would be appropriate here (see Fig. 32). Standard length cords are plugged into one of the front sockets (11). The side socket (17) is for longer cords and for recharge unit cords (for recharging the camera's batteries).

Fig. 29

Fig. 30



Fig. 31

23

Fig. 32



Fig. 33



24

Fig. 34

ACCESSORIES FOR BATTERY CHARGING

Recharge unit I (see Fig. 35) is supplied as standard with the camera and is used for charging the camera's batteries. Recharge unit III with a built-in timer (see Fig. 38) is also available. Batteries can be charged outside the camera using the Hasselblad battery compartment (see Fig. 37).

The Hasselblad battery case (see Fig. 36) can be used to charge batteries in places where no A.C. power supply is available. It holds 5 standard dry batteries which will bring one battery in the camera up to a full charge.

Charging

Move lever (16) to the L-position. Connect the recharge unit to the camera's side socket (17). Make sure the recharge unit is set for the right voltage (110 or 220 V.A.C.) and connect to the A.C. source. Charging time is 14 hours for a fully discharged battery and 28 hours if two batteries are charged simultaneously. Batteries should not be overcharged. Change or charge batteries whenever the recycle time becomes noticeably prolonged. If a battery is so exhausted that the camera stops in the middle of a cycle, move lever (16) to the L-position and connect the recharge unit. Note: charging must be done with the lever (16) in the L-position if the camera has not recycled. If the camera has recycled, charging can be carried out with the lever (16) in either the L or O-position.

Intervalometer II

The Hasselblad intervalometer II (Fig. 34) can be used when many exposures are desired at regular intervals. This unit provides the camera with triggering impulses at adjustable intervals ranging from 2 sec. to 12 min. The electronic intervalometer II is powered by the camera's batteries when connected to the side socket.

Radio

If difficulty is encountered in laying out a long release cord, the camera can be triggered by remote radio (see Fig. 33). However, other transmitters may inadvertently trigger the camera. So use a cord whenever possible.

In general

The Hasselblad 500EL/M can be released by closing the electric circuit between Points 1 and 3 (see the circuit diagram, Fig. 39). External resistance should not exceed 6 ohms if triggering is to be reliable.

Fig. 35



Fig. 36

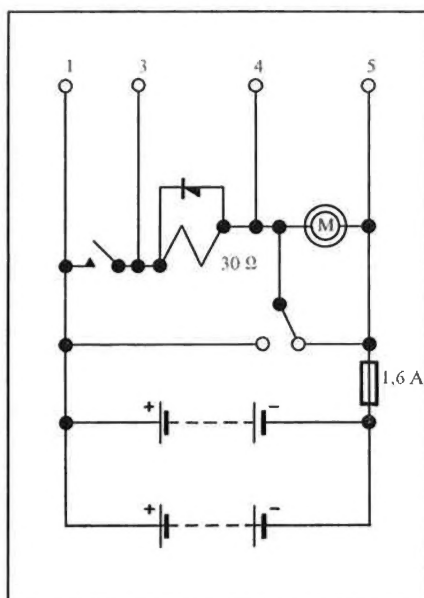


Fig. 37



Fig. 38

25



26

Fig. 39

CIRCUIT DIAGRAM

Voltage: 6 V
Batteries: One or two DEAC 5/500 DKZ
Fuse: 1.6 A slow-blow fuse (5 x 20 mm)
Socket: Preh 8-6404
Exposure current (pins 1 and 3): 0.2 A

GUARANTEE

Your Hasselblad camera has been made in Göteborg, Sweden. It is a quality product and therefore covered by a manufacturer's guarantee against faulty materials or workmanship for a period of one year. Send us the enclosed registration card as soon as you receive your camera. Print your name and address. Upon receipt of your registration card, we will send you our guarantee card and add your name and address to our directory of Hasselblad camera owners. This means that you will be regularly sent all the new folders and booklets, etc., we print each year and at no charge to you. The above guarantee does not apply to damage to the camera caused by careless handling. Transport charges to and from the nearest Hasselblad franchised service center are to be defrayed by the camera owner.

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